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Abstract

EFFECT OF CHEMICAL BINDING ON NEUTRON THERMALIZATION

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The paper discusses the effect of chemical binding on the integral and differential scattering characteristics and the formation of slow neutron spectra in the most important moderators (C, H_2O, Be, ZrH, LiH).

The differential scattering cross-sections which are calculated with the aid of the UPRAS code taking account of the acoustic, optical and diffusive motions of the atoms, are used for the analysis of the neutron spectra in heterogeneous media, media with a temperature gradient and media with a pulsed source.

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